

Application No. 10/691,272
Response dated: July 17, 2006
Reply to Office action of April 19, 2006.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Currently Amended) An optical cursor control device having a worktable and an optical mouse moved on the worktable by an operator, the optical mouse comprising:
a case;
a light guide disposed at a sidewall of the case to introduce external lights into the case, a portion of the light guide being exposed to an outside of the case;
an optical sensor disposed in the case to detect output lights of the light guide; and
a printed circuit board with electronic parts processing an output signal of the optical sensor to generate an output signal that corresponds to a position of the case.
2. (Original) The optical cursor control device according to claim 1, wherein the light guide is a prism.
3. (Original) The optical cursor control device according to claim 2, wherein the prism has a first area that accepts lights reflecting from a surface of the worktable adjacent to the case and a second area that introduces lights passing through the first area into the optical sensor.
4. (Currently Amended) The optical cursor control device according to claim 3, wherein the prism further comprises ~~ing~~ light concentrators disposed at the first and second areas, and the light concentrators increase light intensities passing through the light concentrators.
5. (Original) The optical cursor control device according to claim 4, wherein the light concentrators are convex lenses.
6. (Original) The optical cursor control device according to claim 1, further comprising:

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a switch module mounted on the printed circuit board; and
a button disposed on a top of the case to turn on or off the switch module.

7. (Currently Amended) The optical cursor control device according to claim 1, wherein the light guide has a light concentrating surface that accepts external lights of the case and an illuminating surface irradiating lights penetrating the light concentrating surface onto the surface of the worktable through an opening formed in a lower panel of the case, the illuminating surface having an area smaller than that of the light concentrating surface and the optical sensor detecting lights reflected from the surface of the worktable.

8. (Original) The optical cursor control device according to claim 7 further comprises a light emitting device installed in the case, wherein the light emitting device is automatically or manually turned on and lights from the light emitting device are irradiated onto the surface of the worktable through the opening.

9. (Original) An optical cursor control device having a light concentrating pad and an optical mouse moved on the light concentrating pad by an operator, the light concentrating pad comprising:

- a light concentrating plate;
- an optical wave guide for passing light reflected from the light concentrating plate;
- a lower reflecting plate attached to a bottom of the optical wave guide for upwardly reflecting the light introduced into the optical wave guide; and
- an upper transparent plate attached to a top of the optical wave guide for passing the light reflected from the lower reflecting plate.

10. (Original) The optical cursor control device according to claim 9, wherein the upper transparent plate includes regular patterns drawn on a surface thereof.

11. (Currently Amended) The optical cursor control device according to claim 9, wherein the optical mouse comprises:

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a case including a lower panel, the lower panel having an opening;
an optical sensor mounted inside the case for sensing reflected light introduced into the case through the opening; and
a printed circuit board for processing a signal outputted from the optical sensor to generate an output signal that corresponds to a position of the case.

12. (Currently Amended) The optical cursor control device according to claim 11, wherein the optical mouse further comprises:

a switch module disposed on the printed circuit board; and
a button disposed at the top surface of the case to turn on or off the switch module.

13. (Original) An optical cursor control device having a light concentrating pad, and an optical mouse moved on the light concentrating pad by an operator, the light concentrating pad comprising:

a light source;
an optical wave guide for passing light emitted from the light source;
a lower reflecting plate attached to a bottom of the optical wave guide for upwardly reflecting the light introduced into the optical wave guide; and
an upper transparent plate attached to a top of the optical wave guide for passing the light reflected from the lower reflecting plate.

14. (Original) The optical cursor control device according to claim 13, wherein the upper transparent plate includes regular patterns drawn on a surface thereof.

15. (Currently Amended) The optical cursor control device according to claim 13, wherein the optical mouse comprises:

a case including a lower panel with an opening;
an optical sensor mounted inside the case for sensing reflected light introduced through the opening; and

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a printed circuit board with electronic parts processing a signal outputted from the optical sensor to generate an output signal that corresponds to a position of the case.

16. (Currently Amended) The optical cursor control device according to claim 15, wherein the optical mouse further comprising:

a switch module disposed on the printed circuit board; and
a button disposed at the top surface of the case to turn on or off the switch module.